

SLR(K) grammar

$S \rightarrow SaB$

$S \rightarrow C$

$B \rightarrow ab$

Input String

Caa baab

$S \Rightarrow SaB \Rightarrow Saab \Rightarrow SaBaab \Rightarrow Saabaab$
 $\Rightarrow Caa baab$

~~1~~ | C a a b a a b

C | a a b a a b

S | a a b a a b

S a | a b a a b

S a a | b a a b

S a a b | a a b

S a B | a a b

S | a a b

S a | a b

S a a | b

S a a b |

S a B |

S |

~~Reduce~~ Shift

~~Shift~~ Reduce using rule 2

Shift

Shift

Shift

Reduce // // 3

Reduce // 1

Shift

Shift

~~Reduce~~ Shift

Reduce // // 3

Reduce // 1

End

Stack Configuration

▽	caabab \$	Shift
▽ c	aabab \$	reduce using rule (2)
▽ S	aabab \$	Shift
▽ Sa	baab \$	Shift
▽ Saa	baab \$	Shift
▽ Saab	ab \$	shift reduce using rule (3)
▽ Sab	ab \$	shift reduce using rule (1)
▽ S	ab \$	Shift
▽ Sa	ab \$	Shift
▽ Saa	b \$	Shift
▽ Saab	\$	reduce using rule (3)
▽ Sab	\$	// // // (1)
▽ S	\$	Terminated

عن الإجابة في الخطوات هذه الطريقة

أو الطريقة السابقة

$$S \rightarrow SaB$$

$$S \rightarrow a$$

$$B \rightarrow ab$$

Input : aab

$$S \Rightarrow SaB \Rightarrow Saab \Rightarrow aaab$$

| a a b

Shift

a | a a b

Shift/Reduce Conflict

S | a a b

Shift

S a | a b

Shift / Reduce Conflict

S a a | b

| a a a b

Shift

a | a a b

Shift

a a | a b

Shift

a a a | b

Sh

a a a b |

Reduce

a a B |

Syntax error !

$S \rightarrow SA$

$S \rightarrow a$

~~$A \rightarrow a$~~

$A \rightarrow a$

Input: aa

∇
 ∇a

aa\$

a\$

Shift

reduce/reduce Conflict
rule (2,3)

reduce using rule 2 using rule 3

∇S

a\$

Shift

reduce/reduce conflict

using rule (2,3)

∇A

a\$

∇Sa

\$

∇Aa

\$

use rule (2)

∇SS

\$

rule (3)

∇SA

\$

∇AS

Error

∇AS

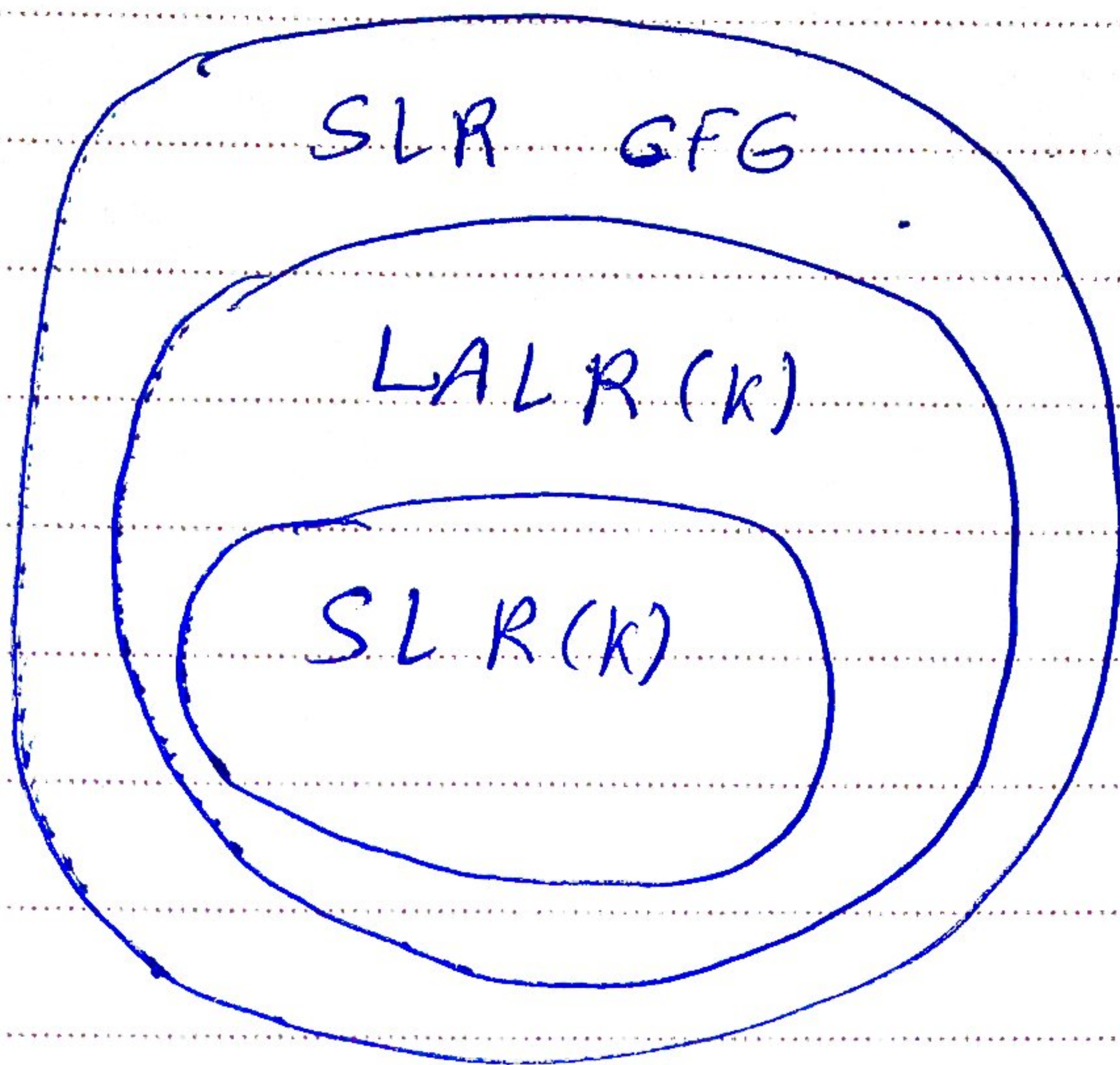
Error

Error

∇S

reduce using rule (1)

Slide 50



Viable prefixes

$$E \rightarrow T + E \mid T$$

$$T \rightarrow \text{int} * T \mid \text{int} \mid (E)$$

Stack rest of input string

(E)

Stack Configuration

• (E) no prefix

(• E) (is prefix

~~(E) is prefix~~

(E •) (E is prefix

(E) • (E) is prefix